CLAIMS

1. A non-invasive method for treating cells affected by at least one oncogenic virus, comprising the steps of:

- providing a substance comprising at least one of ozone, an ozone donor, oxygen and an oxygen donor; and

- subjecting an area of body tissue comprising said affected cells to said substance.

2. A method according to claim 1, wherein said area of tissue constitutes at least a portion of an organ that can be affected by oncogenic viruses, for example cervix uteri, vagina, rectum, or larynx.

3. A method according to claim 1, wherein said oncogenic virus is Human papilloma virus.

4. A method according to claim 1, wherein said step of subjecting comprises the steps of:

- guiding said substance to said area;

- treating said affected cells by means of said substance; and

- guiding used substance away from said area.

5. A method according to claim 1, further comprising the step of desiccating said affected cells by means of said substance.

6. A method according to claim 2, wherein said cells constitute epithelial cells in the case that said organ is cervix uteri.

7. A method according to claim 5, wherein said area is the portio of the cervix uteri.

8. A method according to claim 5, wherein said area is the inside of the cervical canal of the cervix uteri.

9. A method according to claim 1, wherein said substance is a liquid or a solid or a mixture thereof, further comprising the steps of:

- providing a substance holder with said substance; and

- positioning said substance holder at said area.

10. A method according to claim 9, further comprising the steps of:

- sealingly enclosing said area by means of said substance holder such that a chamber is defined by said substance holder and said body tissue of said area; and

- creating an underpressure within said chamber.

11. A method according to claim 1, further comprising the step of monitoring parameters indicating status and progression of the treatment.

12. A method according to claim 11, further comprising the step of controlling said parameters.

13. A method according to claim 11, said parameters being selected from the group consisting of concentrations, substance flow, conductivity, humidity, pulse, pressure at said area, duration of the treatment, temperature at said area, pH at said area, and break down products at said area.

14. A method according to claim 12, wherein said step of controlling is remotely performed.

15. A method according to claim 4, further comprising the step of pumping said substance away from said area.

16. A method according to claim 4, said step of treating comprising the step of bringing said substance into contact with said area of body tissue.

17. A non-invasive method for treating cells infected by at least one of pathologic viruses, bacteria and fungi in uterus cavity and uterine tubes, comprising the steps of:

- providing a substance comprising at least one of ozone, an ozone donor, oxygen and an oxygen donor; and

- subjecting at least an area of said uterus cavity and uterine tubes comprising said affected cells to said substance.

18. A method according to claim 17, comprising the steps of:

- guiding said substance into the uterus cavity;

- treating said affected cells by means of said substance; and

- guiding used substance away from said uterus cavity.

19. A device arranged to be positioned at the cervix uteri of a human body, the device comprising a cup, having a bottom and a wall attached to the bottom and extending therefrom, and a shaft connected at one end thereof to the bottom and extending in an opposite direction of the wall, said shaft comprising at least one inlet duct and at least one outlet duct, said wall having a mouth portion arranged to encircle the portio of the cervix uteri, and the height of the wall being such that, when the device is disposed at the cervix uteri, a chamber is defined by said bottom, said wall and said portio, said outlet duct having at least one opening within said chamber.

20. A device according to claim 19, further comprising a supporting structure having a plurality of apertures, which supporting structure is attached to the wall at a distance from the bottom and extending across the cup.

21. A device according to 20, wherein said supporting structure has a central portion being impervious.

22. A device according to claim 19, wherein the cup is provided with a central pin extending in the same direction as the wall.

23. A device according to claim 22, wherein the pin is arranged to cover the end of the cervical canal, and wherein said inlet duct has at least one mouth within said chamber.

24. A device according to claim 23, further comprising a supporting structure having a plurality of apertures, which supporting structure is attached to the wall at a distance from the bottom and extending across the cup, at least an end portion of said pin protruding

through the supporting structure in order to provide for said covering.

25. A device according to claim 22, wherein the pin is joined with the bottom of the cup, is elongated, and extends beyond the mouth of the cup such that the pin, when the device is positioned at the cervix area, extends at least a portion into the cervical canal.

26. A device according to claim 25, wherein a top portion of the pin is provided with a retaining portion comprising a circumferential flange.

27. A device according to claim 25, wherein the pin is surrounded by a supporting structure comprising a plurality of apertures.

28. A device according to claim 27, wherein said supporting structure comprises a portion extending radially from the pin and being engaged with the wall of the cup.

29. A device according to claim 25, said at least one inlet duct extending longitudinally of the pin, and a plurality of branches diverging from said at least one inlet duct and debouching at the outer wall of the pin.

30. A device according to claim 29, wherein said pin is provided with at least two longitudinal flanges, arranged substantially equidistantly along the circumference of the pin, and wherein said plurality of branches debouch between said at least two longitudinal flanges.

31. A device according to claim 29, wherein said pin is provided with at least one recess extending helically along the length of the pin, wherein said branches debouch into said at least one recess.

32. A device according to claim 19, wherein said cup is provided with retaining elements provided at said mouth portion.

33. A device according to any one of claim 19, said shaft comprising a cylindrical outer wall, said inlet duct being formed in said cylindrical outer wall.

34. A device according to claim 19, wherein said cup is integral with said shaft.

35. A device according to claims 19, wherein said cup is detachably attached to said shaft.

36. A device according to claim 19, said at least one inlet duct debouching at the inner side of said wall of the cup.

37. A device according to claim 22, said at least one inlet duct debouching at the base of said central pin.

38. A device according to claim 19, wherein the total cross-sectional area of said at least one outlet duct is larger than the total cross-sectional area of said at least one inlet duct.

39. A device according to claim 19, wherein said outlet duct is provided as a central duct of said shaft.

40. A device according to claim 19, further comprising a source holding a medicament, said source being connected to the other end of said shaft, and a valve for controlling the flow of said at least one inlet duct.

41. A device according to claim 19, wherein a central axis of said cup is inclined relative to a central axis of said shaft.

42. A device arranged to be positioned at the cervix uteri of a human body, the device comprising a cup, having a bottom and a wall attached to the bottom and extending therefrom, said wall having a mouth portion arranged to encircle the portio of the cervix uteri, and the height of the wall being such that, when the device is disposed at the cervix uteri, a chamber is defined by said bottom, said wall and said portio, said device further comprising a central pin, attached to the bottom and extending in the same direction as the wall.

43. A device according to claim 42, further comprising a supporting structure having a plurality of apertures, which supporting structure is attached to said

wall at a distance from the bottom and extending across the cup, at least an end portion of said pin protruding through the supporting structure in order to provide for covering the end of the cervical canal.

44. A device according to claim 42, wherein said bottom of said cup further comprises an inlet opening an outlet opening.

45. A device according to claim 19, further comprising at least one sensor.

46. A device according to claim 45, further comprising a controller connected to said at least one sensor.

47. A device according to claim 46, further comprising a supplier for supplying a substance to the cup, said controller being connected to said supplier for controlling said supply.

48. A device according to claim 46, wherein the controller has a communication unit for remote communication.

49. A device according to claim 29, wherein said pin is surrounded by a supporting structure comprising a plurality of apertures.

50. A method according to claim 1, further comprising the step of providing a device according to claim 19 for accomplishing said treatment.